

# New record and distribution extension of *Baetodes huaico* Nieto (Ephemeroptera: Baetidae) from the province of San Luis, Argentina

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**ABSTRACT:** Distribution of *Baetodes huaico* extends up to the Province of San Luis (Argentina). This constitutes the southernmost record of this species. Morphological characteristics were used for the species recognition.

The mayfly (Ephemeroptera) from San Luis province are practically unknown due to scarce existing information (Vallania and Corigliano 1990; Vallania and Velázquez 1991) about them, especially in the Baetidae Family. The genus *Baetodes* was originally described by Needham and Murphy (1924) from South America. This genus is characterized by having gills on segment 1–5 only (Needham and Murphy 1924); rudimentary middle tail, cerci with only a few inconspicuous setae (Edmunds 1950); dorsal edge of femora with a compact row of fine setae intercalated with clavate setae; each tibia with a continuous longitudinal and transverse break or articulation on the anterior and ventral surfaces; high dorsal crest on each coxa (Koss 1972, Mayo 1972) among others.

*Baetodes huaico* Nieto, 2004, (Figure 1) is different from other South American *Baetodes* due to the combination of the following characteristics (Figure 2–5): labrum dorsal surface with a row of 8 to 9 thorn-like setae where short and long ones alternate, and end up with 2–3 setae on the lateral margin (Figure 2), two finger-shaped gills in each coxa, dorsal edge of femora I with 10–11 clavate (Figure 3) setae, tarsal claws with 11 denticles (Figure 4), and abdomen with small tubercles (Figure 5) (Nieto 2004).

The material analyzed comes from samples taken from several localities in the *Río Quinto* basin (Figure 6). The specimens were collected with surber-like net with a mesh opening of 300µm and sampling area of 0.09 m<sup>2</sup>. Sixty nymphs were analyzed, 20 from each sampling place. They were fixed and preserved in 70% alcohol. The specimens were observed under stereoscopic microscope and optical microscope, and they were classified taxonomically with the help of the identification keys provided by Fernández and Domínguez (2001), and Domínguez *et. al.* (2006). The new records for the province correspond to the places listed in Table 1, which match the habitats described by Fernández and Domínguez (2001). The collected specimens were deposited in the Entomology Collection at the Zoology Area of the UNSL (*San Luis, Argentina*).

*Baetodes huaico* is recorded in the province of San Luis for the first time. This distribution extension constitutes

the species southernmost record. This species has been previously registered in the provinces of *Catamarca*, *Jujuy*, *Salta* and *Tucumán*, in northwestern Argentina.



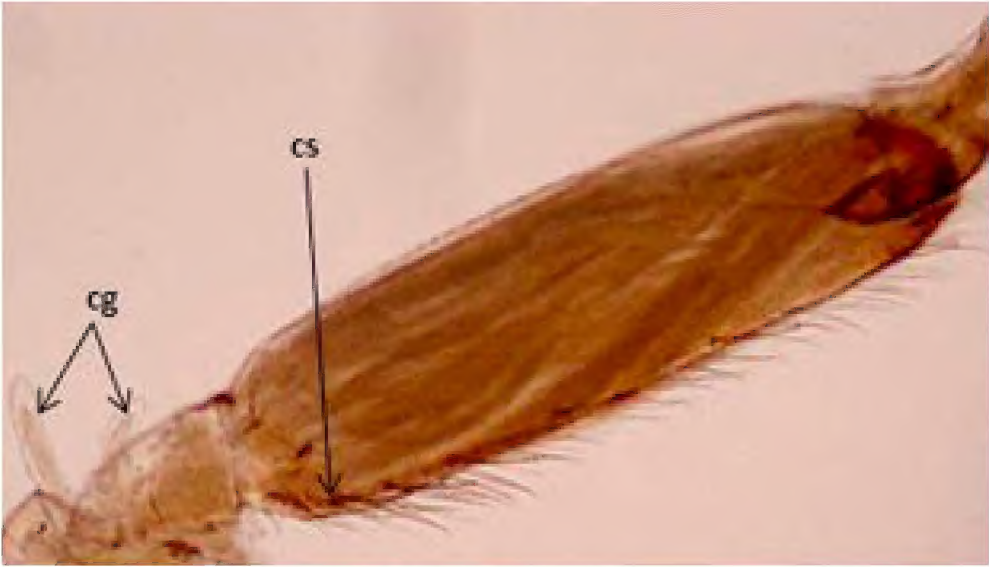
FIGURE 1. *B. huaico* nymph, dorsal view. Scale bar 1mm.



FIGURE 2. Nymph of *B. huaico*, labrum, dorsal view.



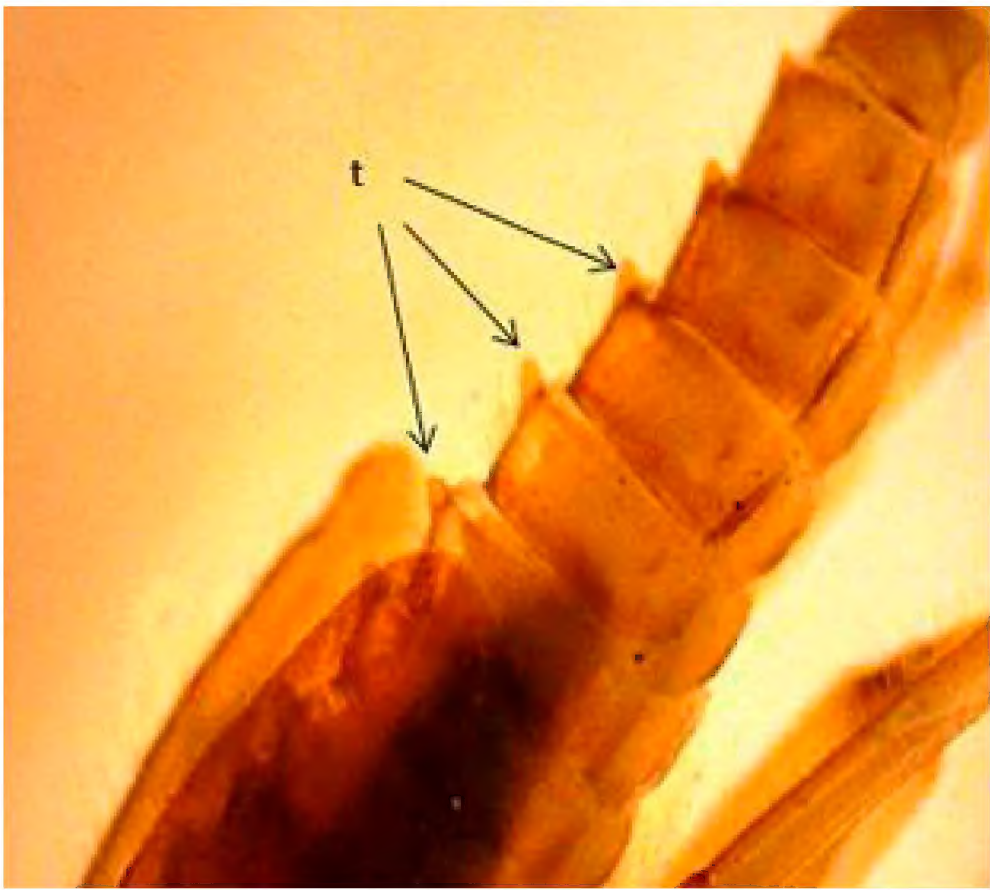
Knowledge about these aquatic species in this region is of vital importance, since it is a semi-arid region, with scarce precipitations and low-flow rivers that have been regulated as a consequence of the construction of numerous dams in the last decades.



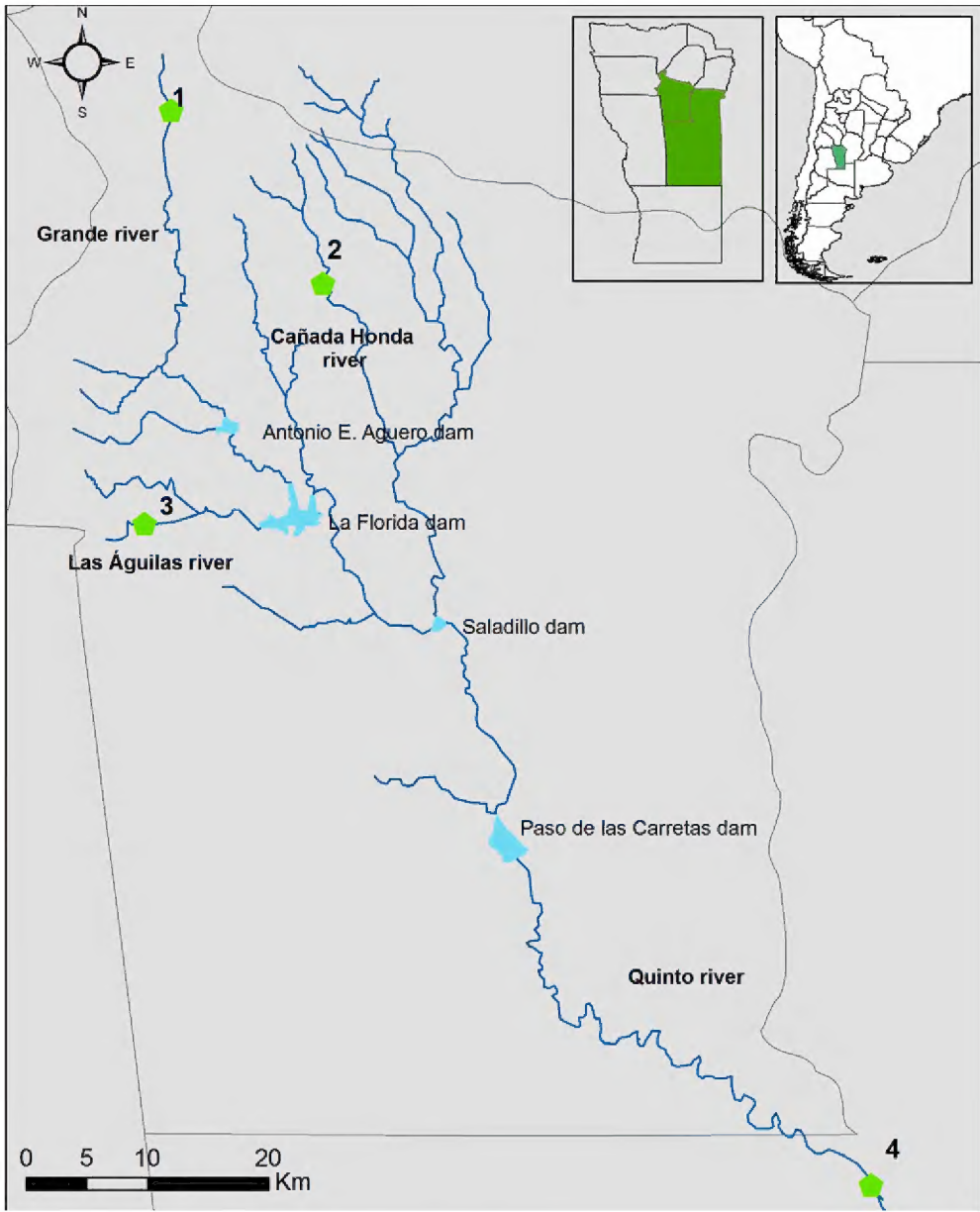
**FIGURE 3.** Nymph of *B. huaico*. (cg) coxal gills; (cs) clavate setae of dorsal edge of femora I.



**FIGURE 4.** Nymph of *B. huaico*. (d) denticles, tarsal claws, lateral view.



**FIGURE 5.** Nymph of *B. huaico*. (t) tubercle, abdomen, lateral view.



**FIGURE 6.** Study area and sampling sites.

**TABLE 1.** Location of *B. huaico* specimen records.

| RIVER        |   | COORDINATES                    | ELEVATION (M A. S. L.) |
|--------------|---|--------------------------------|------------------------|
| Grande       | 1 | 32°48'33.47" S; 66°05'47.41" O | 1635 m                 |
| Cañada Honda | 2 | 32°56'14.22" S; 65°59'03.99" O | 1276 m                 |
| Las Águilas  | 3 | 33°06'55.56" S; 66°06'59.69" O | 1181 m                 |
| Quinto       | 4 | 33°36'19.16" S; 65°34'41.04" O | 567 m                  |

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